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Pension Reform in Bolivia

Innovative Solutions to Common Problems

Hermann von Gersdorff

In some respects Bolivia's bold program of pension reform went beyond the Chilean prototype.

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Summary findings

Bolivia's bold program of pension reform involved the immediate closing down of the old pay-as-you-go system and its replacement by a defined-contribution system based on individual capitalization accounts and managed by the private sector.

The pensions of the old system will be covered by the Bolivian Treasury. Workers will receive compensatory pensions for their contributions to the old system. These will be calculated on the basis of a simple formula that could be improved to reduce the cost of transition.

To avoid high marketing costs, Bolivia has entrusted management of the system to two groups selected through international competitive bidding (to minimize fees). Individual accounts have been preallocated to those two groups on a regional basis or, in large cities, on the basis of the birthdays of affiliated workers. Competition for individual accounts will be allowed in the year 2000 and the market will be opened to other private pension-fund administrators (AFPs) in 2002.

Proceeds from the "capitalization" program will be used to pay an annuity to all Bolivians 65 and older. Funds from the capitalization program will also be managed by the two selected AFPs. Custodianship has been entrusted to a multinational group offering global custodial services.

AFP investments are only subject to upper limits, including relatively high limits for foreign assets. However, they must initially purchase a certain quantity of treasury bonds to help finance the cost of transition.

Bolivian pension reform faces major challenges:

- To create a competitive market for management of pension fund resources and hence achieve competitive returns on investment and higher pensions.
- To eliminate the requirement of investment in treasury bonds.
- To insulate the system from attempts to use AFP funds and capitalization proceeds for public projects. (One way to achieve this would be to transfer ownership of the capitalization proceeds to individual Bolivians.)

This paper — a product of the Private Sector Development Cluster, Finance, Private Sector, and Infrastructure Department — draws on work done for the Bolivia Financial Markets and Pension Reform Project. Copies of this paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Cecilia Pavlak, room I5-030, telephone 202-458-2099, fax 202-334-0113, Internet address cpavlak@worldbank.org. September 1997. (26 pages)

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[1] This paper draws on work done for the Financial Markets and Pension Reform Project (World Bank 1995). I benefited from discussions with many colleagues at the World Bank as well as with Bolivian officials.

A. BACKGROUND

On November 29, 1996 the Bolivian Government adopted a pension reform law (Law 1732) that modified fundamentally the country's pension system. The Bolivian reform changed the defined-benefit publicly-managed pension system into a defined-contribution privately-managed system with individual capitalization accounts.[2] The new system, currently under implementation, has many common features with the reforms undertaken in other Latin American countries but has some important differences, particularly during the transition phase from one system to another.

This paper describes the old and the new pension systems, summarizes the particular features of the new system that differentiate it from other reforms, and presents some of the outstanding challenges to successfully complete the reform.[3] Macroeconomic and financial sector effects of the reform are two important issues for further analysis that are not covered in this paper.

B. THE OLD PENSION SYSTEM

Institutional framework.[4] The old Bolivian pension system was a defined-benefit system created in 1997 and aiming originally at a replacement rate of about 30% of the last wage. To increase the replacement rate unions and professional groups obtained in 1970 changes in the regulations that allowed for complementary pension funds. In 1996, the system consisted of a basic pension system, administered by a public agency

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[2] Under the old system, retirement benefits were one component of the social security system, which provided also survivorship and disability pensions, and medical insurance. The new system includes also survivorship and disability pensions, but leaves medical benefits untouched.

[3] The paper is part of a series of papers by the Financial Sector Development Department of the World Bank on private pension funds in Latin American pension reforms. See Queisser (1997), Vittas (1997a, 1997b, 1997c), and Vittas and Iglesias (1992).

[4] This segment draws on World Bank (1995) and Ballivian (1997).

(FOPEBA), and 38 complementary funds, including the eight social security funds of public universities and one for the armed forces. Most of the complementary fund affiliates were public sector employees. Participation in the basic fund was compulsory for all formal sector workers. Participation in complementary funds was voluntary in principle, but in practice virtually all workers affiliated to FOPEBA were also affiliated to a complementary fund.

Contributions and benefits. Contributions to FOPEBA had three sources: employees contributed 2.5% of their salaries every month, employers contributed 4.5% and the Government was expected to contribute 1.5% (in practice it only paid its contributions for public sector employees). The complementary pension funds had different contribution rates, but all the contributions were made by employees. Rates averaged an additional 6.3% of salaries with a spread between 3.5% and 12%. The retirement age under the old system was 50 years for women and 55 years for men. To qualify for retirement workers had to have a minimum of 180 contributions, equivalent to 15 years of work. The monthly benefit under the FOPEBA consisted of a pension equivalent to 30% of the average monthly salary during the last five years of contributions. Benefits under the complementary pension funds replaced on average an additional 40% of salaries. Benefits were paid in Bolivianos (Bs) and adjusted yearly by 90% of the average general wage increase decreed by the Government. Only the benefits accrued under FOPEBA were explicitly guaranteed by the Government, although the discretionary interventions to bail out complementary funds in trouble created an implicit guarantee for them.

Coverage. The coverage of the system was very small. As of end-1996 FOPEBA had approximately 300,000 active affiliates and most of them were also members of a complementary fund. Of the 300,000 affiliates, about 65% were public sector employees[5] and the remainder were employees mostly of the formal private sector in urban areas. The number of retirees was roughly 120,000. Therefore, the system's dependency ratio was

[5] The largest group is that of teachers with about 86,000 affiliates.

40% against a demographic old age dependency ratio of 6%[6]. The covered wage bill as a percentage of GDP was about 12%.

Bolivia's economy has a large informal sector where about 60% of the labor force is employed but the small coverage of the defined benefit pension system was also the result of widespread evasion. Affiliates as a share of the total (urban) economically active population in 1996 were roughly 12% (22%)[7]. Other indicators of evasion are the composition of the affiliates as only 40% are workers and the rest are technicians and professionals, while only 15% of the enterprises registered with the internal revenue office were affiliated to the pension system.

There were few incentives to join the pension system. Previous inflationary periods had eroded the value of pensions and there was no enforcement of affiliation norms. Contributions to the pension system were widely perceived by both employers and employees as an additional tax on labor. Although the old system had also strong incentives to underreport wages to lower contribution payments, among other things because the pension was based on the salary of the last 12-60 months, underreporting does not seem to have been widespread. The system's income from contributions was about 12% of the covered wage bill during the last years of the system and in line with the expected collection. Most likely the large share of public sector contributors kept the underreporting problem small.

Financial situation. The old pension system was financially unsustainable. Regular transfers from the Treasury to FOPEBA (amounting to more then 1% of GDP between 1993 and 1996) and occasionally to some complementary funds had become necessary and the accumulated deficit of FOPEBA was calculated to reach $400 million by 2002, when it would have amounted to nearly 5% of GDP. The complementary funds

[6] This number results from using 65 as the cutoff age. Using 60 as the cutoff age, the ratio becomes 10%.

[7] The rural and urban populations are about equal.

were in different situations. A few of them were solvent but most were financially bankrupt.

In present value terms the deficit of FOPEBA and the complementary fund for public employees was estimated at more than $3,000 million (or 40% of GDP). This situation was caused by several factors:

i. the relation of active to passive affiliates was less than 3 to 1 on average, while solvency required an equilibrium ratio closer to the demographic old age dependency ratio of about 10 to 1. This ratio was worsening as the demographic tendencies in the country implied an increasing proportion of retirement-age people relative to active contributors;
ii. the hyperinflation in the mid-eighties, combined with deficient management, seriously eroded the pension funds' reserves (resources left after pension contributions were used for health expenditures);
iii. the administrative costs of the funds were very high. At 17% of contributions on average these were not much higher then the 16% that Latin America used to have on average but this level of costs triggered reforms in other countries; and
iv. the private sector had a large debt to the system, arising from non-payment of the contributions of employers, and even a failure to register a large share of the contributions of workers.

During the life of the old pension system several attempts at reform were undertaken, mostly to improve monitoring and supervision, collection of contributions, and use of funds. In 1985, health insurance was separated into a system of its own to avoid the common practice of using pension contributions for health care expenditures. But the actuarial studies envisaged in the original pension law of 1957 were never undertaken. These would have shown the need either to adjust the retirement age to available resources and the increasing life expectancy or to increase the contribution rates to maintain financial balance.

Old Pension System[8]: Revenues and Expenditures

Year	Benefits		Contributions		Deficit	
	Bs mn.1991	% of GDP	Bs.mn.1991	% of GDP	Bs.mn.1991	% of GDP
1993	477	2.35	446	2.20	31	0.15
1994	531	2.50	484	2.28	47	0.22
1995	621	2.49	503	2.26	118	0.23

Without changes to the system's framework that addressed the incentives of the stakeholders the reforms were doomed to fail. In particular, participants in the scheme had no sense of ownership of the resources being handled. This led to low levels of accountability in the management of these resources and in some cases to outright corruption as is being discovered now that the complementary funds are being liquidated.

C. THE NEW PENSION SYSTEM

The previous unsuccessful reform experiences and the unsustainability of the old pension system led already the previous Government of 1989-1993 to design a pension reform that would radically change the system. The current Government completed the design of the new pension system when it passed Law 1732 in November 1996. The Law closed the old pension system and established a new one based on individual capitalization accounts. It also established a social program ("Bonosol") designed to provide old-age relief and financed by the shares of capitalized enterprises[9].

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[8] Includes both FOPEBA and complementary funds (including university funds).

[9] The "capitalization" program has involved the transfer of 50% of the capital and managerial control of a public company to a private partner, often a foreign investor, in exchange for an amount of investment in the company determined through bidding for that control. The program has been applied to the six largest public enterprises in Bolivia. The remaining 50% shares in the privatized and recapitalized companies are held in trust until their transfer to the privately managed pension

Individual Capitalization System

Contributions. Contributions are withheld by employers and deposited into individual accounts managed by private pension fund administrators (AFPs). The withholding rate on salaries is 12.5%. This includes 10% to be deposited in each individual account for long-term capitalization, 2% for an insurance premium covering physical impairment or death from common causes, and 0.5% for the AFPs' services[10]. In addition, employers will pay 2% of salaries for insurance covering physical impairment or death from work-related causes[11].

Benefits. There is no fixed retirement age. Individual workers are free to retire before reaching 65 if they have accumulated savings that are adequate to replace at least 70% of their average salary of the last five years for the remainder of their actuarially calculated life expectancy. Retirement is possible at age 65 regardless of the amount of savings accumulated.

There is no Government guarantee of a minimum pension. All participants over 65 receive the Bonosol annuity of US$248 per year plus at least 70% of the minimum monthly wage of US$48[12] until their savings are exhausted. Afterwards they receive just the Bonosol annuity. Therefore, while pensioners draw on their savings they can expect

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funds (AFPs). They are earmarked to finance the "Bonosol" program (see below). For a brief discussion of the "privatization by capitalization" program, see Ewing and Goldmark (1994).

[10] Additional deductions from monthly salaries are a 13% tax after excluding 2 minimum wages (US$95), 10% contribution for health insurance, and a 3% contribution for a housing fund.

[11] Both insurance premiums will be adjusted according to case history. Experience in other Latin-American countries leads to the expectation of lower premiums in the future.

[12] The minimum wage is adjusted periodically but is currently about 25% of the average monthly wage of about US$190 per month. The average wage of workers affiliated to the old pension system is about US$250.

total income above the minimum wage. All pensions, those paid under the old system and those arising from the new system, are indexed to the US dollar.

In addition there are death, survivorship and disability pensions financed by the insurance contract. An important feature is that disability pensions for common risks are only paid for total disability; there are no partial disability pensions. These pensions are equivalent to 70% of the reference salary and they also include continued payment of the contribution into the individual's retirement account, so that disability pensions are replaced by old age pensions at age 65. Disability from work-related causes includes partial and total disability pensions, also with continued payment of the contribution into the individual's retirement account so that this pension is also replaced by old age pension at age 65.

Affiliation. All current contributors to the old pension system were automatically transferred to the individual capitalization system on May 1, 1997, and the AFPs started collecting their contributions[13]. All enterprises, as contribution-withholding agents, have to formally affiliate all their workers to an AFP within two years. Included are those individuals that fulfill requirements to retire under the old system as of April 30, 1997, but continue working. This implies that, at the initial date, the new system will have around 300,000 affiliates.[14] All new entrants to the working force must affiliate to the new system. In addition, all currently employed persons that should have been affiliated to the old pension system, but were not, are required by law to be affiliated to the new system. It is estimated, that there are about 500,000 unaffiliated workers in about 10,000 enterprises. Finally, independent workers who earn at least the minimum salary can also affiliate to the new system, on a voluntary basis. As of June 16, 1997, 84,897 private

[13] Unexpectedly, contributions to the old system increased from Bs. 26 million in November 1996, when the Pension Law was passed, to Bs. 43 million in April 1997. Most likely the effect of contributing to a system about to be closed was dominated by the increased scrutiny.

[14] Approximately 20,000 current affiliates to the old system are expected to fulfill the requirements for retirement by April 30, 1997, and will retire under the old pension system rules at the expense of the Treasury.

sector workers, equivalent to 77% of current participants, and all public sector workers with the exception of the military[15] had been affiliated to an AFP.

Management. Because of the small size of the country and to avoid the high marketing costs experienced in other Latin American countries, the authorities decided to authorize only 2 management companies. Thus, for the first five years the individual capitalization accounts will be managed by two private pension fund administrators (AFPs), which were selected through an international bidding process for the lowest service fee. Initially these AFPs will share the market in the four major cities of the country (La Paz, Cochabamba, Santa Cruz and El Alto) that have 35% of the population[16], and will be regional monopolies in their area of exclusivity[17]. Sharing of the market in the major cities among the AFPs will be according to the worker's birthday[18]. Competition in these markets will start on January 1, 2000, when workers can switch between AFPs and new workers are allowed to choose between the AFPs. In May 2002 the market will be open to new management companies when competition will also reach the exclusivity areas and expand in the major cities.

Like in the Chilean pension system, the individual accounts of the affiliates own units in a joint portfolio, much the same as in a mutual fund. AFPs have to invest the joint portfolio in accordance with maximum limits set by the regulations and enforced by the Superintendency of Pensions. However, they are also required to buy for 15 years, in proportionate shares, up to $180 million per year of the Treasury bonds that will be issued to finance the transition from the old to the new system. To allow for sufficient

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15 This will require a procedure that safeguards confidentiality.

16 These cities have 78% of the population in the 10 cities with more than 50,000 inhabitants and 60% of the urban population.

17 For the purpose of determining the area of exclusivity, the country was divided in a northern and southern region, separated by a dividing line running East-West, and excluding the four major cities. The AFP with the best bid was given first choice and selected the northern area of exclusivity.

18 Workers born on an uneven day to one AFP and those on an even day as well as January 1,3, and 5 to the other AFP.

diversification, the pension law specifies that the maximum limit on foreign securities holdings, to be determined by the Board of the Central Bank, will be no less than 10%[19] and no more than 50% and only instruments traded in the New York Stock Exchange and the London Stock Exchange qualify.

Compensatory Pensions. Those affiliates who have contributed to the old pension system will receive a compensation for the rights they acquired from the State. This compensation will be paid monthly upon retirement. For those that have more than 60 contributions (equivalent to five years of work), the monthly compensation will be calculated by the formula:

$$\text{Compensation} = \frac{\text{Years} * 0.7}{25} \times \text{last monthly salary}$$

where "Years" is the number of years, or fraction thereof, contributed to the old system. For example, for someone who has contributed for 25 years, the above formula implies that, upon retirement, the State will replace 70% of the monthly salary of October 1996 for those employed at the time or the last monthly salary before this date for those that were unemployed at the time. Both the reference salary and the compensatory pension are subject to a ceiling of 20 times the minimum wage. This amount will be indexed in US dollar; thus, there will be an implicit tax on the compensation that is equivalent to the US inflation between October 1996 and the time of retirement. For those who have less than 60 contributions, the compensation will be a lump-sum equal to 100 times the amount given by the above formula up to a payment of 20 times the minimum wage.

[19] The 10% limit is the lowest level that the Central Bank can set for the maximum percentage the AFP can invest in foreign securities. The AFP can choose to invest nothing in foreign securities or any amount up to the maximum limit. At the time of writing this paper, the investment regulations have not been issued by the Central Bank. The issue is not immediately relevant since the AFPs are initially required to invest a sizable part of their funds in treasury bonds.

Current retirees. Those people who have already retired under the old system will continue to receive their pensions as per that system. In addition, those who qualify for retirement under the old system's rules by May 1, 1997, can retire with the benefits of the old system or choose to continue working and increase their salary replacement rate - calculated as per the old system- by 2% for every year they remain in the work force beyond their eligibility. Alternatively they can buy an additional annuity with the proceeds of their individual account. The contribution rate for this group of people is 12.5% of salaries and is also collected by the AFPs. When a worker retires under the old system, the AFP concerned transfers the balance in the individual account to the National Treasury. Benefits to current retirees and eligible retirees will be financed by the National Treasury. Currently a transitory agency is calculating and paying the pensions under the old system. However, the system is designed in such a way that the payments of these pensions will be made by the private sector.

The "Bonosol" Program

The Government decided that it would use the proceeds of the "capitalization" program for an untargeted old age relief bond instead of public projects. Government arguments for this untargeted program were the absence of a social safety net in old age, the large impact that this program would have on the large number of very poor people, the capitalized enterprises had been "paid" by the beneficiary population, and the dismal track record of public sector projects.

Bonosol is an annuity, intended to distribute the benefits of the capitalization program to all resident Bolivian citizens who were 21 years or older as of end-1995, once they reach age 65 (about 3.5 million people). Currently there are no plans for a similar old age benefit for the next generations. One of the arguments to exclude the younger population and the next generations from the BONOSOL is that the capitalized enterprises had been "paid" by the beneficiary population and they are just being "repaid". The creation of a minimum pension scheme for the next generations will not become necessary for at least 40 years.

The benefit is financed by the principal and investment income on the portfolio consisting of 50% of the shares of the capitalized enterprises. This is currently valued at about $1,650 million[20] equivalent to 22% of GDP, less a provision for death benefits to be financed also with these funds. The annuity will amount to $248 per person per year for the first five years and will then be revised every three years according to changes in the portfolio and life expectancy[21]. There are currently 302,555 potential beneficiaries. As of June 20, 1997, 191,245 persons, equivalent to 63% of the potential beneficiaries and about 83% of the about 230,000 beneficiaries that have been issued an ID, have been paid their annuity for 1997 by the AFPs. This performance is remarkable because to avoid fraud the Bonosol has to be collected in person. For those unable to get to the payment sites the AFPs are sending representatives to hospitals, jails, and homes. Only 14 fraud attempts have been detected so far in the distribution of about US$48 million. It is expected that during 1997 about 80% of those eligible will receive this benefit, as not all citizens have the identity card or registration document needed for collecting the benefit. The remainder will be able to collect the 1997 Bonosol at a later date.

The two AFPs that manage the individual capitalization accounts will also manage the "Bonosol" portfolio and distribute its benefits. To this end, the capitalization shares will be distributed between the two AFPs in proportion to the number of affiliates in each every time that the Bonosol annuity is recalculated. Initially each AFP manages half of the assets or about US$800 million[22]. An important feature in the management of these assets is that all liquid assets arising either from dividends or the sale of shares that are not used

[20] This valuation arises from the investment commitments made by the investors in the capitalized shares. The market value of these shares will of course fluctuate and will most likely be different.

[21] On the issue of the benefit of the Bonosol and its possible regressive impact, see Ballivian (1997).

[22] Not US$825 million per AFP because right at the beginning some of the assets were used to pay the first Bonosol annuity.

to pay the Bonosol have to be invested in units of the joint portfolio of individual accounts and in this way are subject to the same investment limits and regulations as the contributions to the new pension scheme. Therefore, after the first inflow of cash, this portfolio will consist of the capitalized shares and units of the joint portfolio and eventually will only own units and be fully diversified and facilitate the supervision efforts of the regulator.

Regulatory Framework for the New System

Law 1732 includes also provisions for a new institutional regulatory framework for the entire financial sector. These provisions foresee the establishment of a General Superintendency for the Financial Sector (SIREFI) and four sector superintendencies: Banking, Pension System, Insurance, and Capital Markets. The superintendents of SIREFI, of pensions and of the capital markets were appointed in mid-March 1997, while the other two had already been appointed. Supreme Decree 24469, issued January 22, 1997, provides further details of the legal regulatory framework.

D. UNIQUE FEATURES

Link with Capitalization of Enterprises

An outstanding feature of the pension reform is its link to the privatization and recapitalization of the largest public sector enterprises. Law 1544 on capitalization (March 21, 1994) established that the resources and shares that resulted from the capitalization program would be managed by private pension fund managers selected through an international bidding process. Therefore, in the normal management process of these assets, the ownership of the shares will over time be well distributed over many private investors. An important effect of this early definition was that potential investors in the capitalization program received an early assurance that they would not be partners in a joint venture with the Government. It is widely thought that this resulted in higher bids for the privatized entities.

The capitalized shares were constituted into a fund (Fondo de Captitalización Colectivo or FCC) to be managed by the AFPs. The collective owners of the FCC are all eligible Bolivians that will benefit through the Bonosol. At some moment the plan was to have individual accounts in the FCC, like in the contributory pension scheme, to establish a more direct ownership[23] of the assets by the citizens. This alternative was rejected because it was administratively more complicated and would have taken longer.

Through the Bonosol program, Bolivia set up a universal old age income support equivalent to about 27% of Bolivia's per capita income. At a replacement rate of only 11% of average earnings, the Bonosol's objective is to provide subsistence support for the poor. When only the average labor income of the poor is considered, the Bonosol replaces 85% of the income of the extreme poor and 50% of the income of the poor. The system is not financed by taxes on labor and thus, does not distort investment decisions against the use of labor. Establishing the Bonosol also allowed for a pension system that does not have guarantees of minimum pension or minimum return guarantees on the portfolio, thus leaving Bolivia's Government with very few contingent liabilities compared to other countries that have reformed their pensions systems and of course compared with countries that have not yet reformed them.

While setting up the Bonosol in the way it was done had several advantages for the new pension system it could also be a source of instability if future Governments decide that they could put the assets in the FCC to "better" use than paying the Bonosol. Diversion of the assets of the capitalization program, in addition to amounting to a substantial breach in the rules for provision of old age income, would require significant

[23] Direct distribution of the shares to Bolivians was considered but rejected as having too many drawbacks.

reforms to the new pension system, would reduce the coverage of the system, and would threaten the commercial viability of the system and of the AFPs. The solution to this issue is to develop a stronger sense of ownership over the FCC's assets by the eligible Bolivians to increase the political cost of the diversion of the assets.

AFP Selection Process

The link with the capitalization program also meant that the Government through the Ministry of Capitalization[24] had to find managers for the resources arising from the capitalization program. These resources were held by an international trustee until their transfer to the selected AFPs. The decision to allow for a bidding process to choose the pension fund managers also forced an early decision on the number of participants in the market. After a long and intense debate the decision was to have initially only two AFPs because of the current size of the market, to ensure the commercial viability of the AFPs, and to attract highly reputable pension fund managers.

The selection of the AFPs to manage the assets was a two stage process that started in July 1996, with the request for expressions of interest published in the Wall Street Journal, Financial Times, and in Pensions & Investments. From the beginning the process received technical assistance from an international strategic adviser and an international legal adviser. Large efforts were made to keep the process as transparent as possible and to provide equal access to the information. The objectives for the bidding process were to attract the maximum number of reputable and experienced pension fund mangers, to create a competitive process, and to select the best possible AFPs. Following a strong promotional effort[25], 73 enterprises bought the Terms of Reference (TORs) in August 1996.

[24] This Ministry is a temporary ministry that was set up to exclusively carry out the capitalization of enterprises and the pension reform. Now that both processes are well advanced this ministry will be closed as of June 30, 1997.

[25] Including seminars, road shows, personal presentations, and an Internet home page.

The TORs specified the minimum criteria to be satisfied by the asset managers and that 8 of the qualified managers would be selected. The main criteria to qualify were:

i. Experience in asset management, with at least $10 billion in assets under management, and at least 20 years of portfolio management of which at least 10 had to be in global asset management. This requirement was important because the state of development of Bolivia's capital market made it necessary to invest a large portion of the assets in international markets in addition to efficient diversification arguments.
ii. Minimum experience in pension fund administration and record keeping, with at least 100,000 accounts and 5 million transactions a year with the managed accounts.
iii. Experience in establishing new systems, education, information and enrollment, including experience with workers that haven't been enrolled in pension plans and with affiliating new members.

To evaluate the criteria a questionnaire with two sections had to be filled out by each enterprise. The first section had 8 pass/fail criteria that had to have a 100% pass rate for the second section to be evaluated. The second section had 26 quantitative and qualitative questions where the quantitative questions were worth 60% of the total.

Because of a tie, 9 instead of 8 of the 12 asset managers that presented applications on September 19, 1996 were selected for the second stage (see Table). During this stage the selected managers had the opportunity to provide feedback on the regulations to the law as well as on the proposed service contract. The economic bidding was to be assessed on one variable "average monthly management fee per account" (AMMFA). This fee was a weighted average of the asset management fee, fee for benefit payment[26], and the 0.5% of the affiliate's salary.[27]

[26] All bidders decided not to charge a fee for benefit payments.

[27] The 0.5% was preset by the Government in the TORs.

Because of the importance of AMMFA, a substantial effort was expended to make clear how this variable would be calculated. The bidders were provided with predefined scenarios regarding assets to be managed, salaries, benefit payments, and insurance premiums. The lowest bidder would be one of the selected AFPs and the next lowest bidder that matched the lowest bid would be the second selected bid[28].

As a result of the requirement of a guarantee from the head office in the form of a solidary guarantee only limited by the assets under management that initially are of about US$800 million for each AFP, only three managers submitted bids. (It has been argued that American firms were constrained by US law in offering such a guarantee). This guarantee is in force as long as the structure of the business for which the bid was made is unchanged as reflected by the Pension Law and its regulations. Although this requirement helped to reduce the capital requirements for an AFP and avoid coinvestment requirements, it was deemed excessive by several managers. Another issue that reduced the interest in bidding was the standard of care. Standard of care rules used in the US are different from the ones in Bolivia. The TORs required compliance with Bolivian laws. Any claim would be first decided in a Bolivian court, and only in the last instance would there be recourse to international arbitration. Another, less verifiable, factor for the small number of bids is that some of the potential bidders were very open about how aggressive their bids would be and could have discouraged the other potential bidders.

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[28] In case that no bidder matched the lowest bid, the fee structure for the whole system would be the one of the second lowest bidder.

Qualified Asset Managers
Franklin Templeton - Provida Internacional S.A.
Banco Bilbao Vizcaya S.A.
Goldman Sachs Asset Management International - Financial Administrative Services Corp.
Aetna- J.P. Morgan
Citibank
SBC Brinson - AON Consulting
Invesco - Argentaria
Morgan Stanley Management, Inc. - Cruz Blanca Internacional S.A.
Dresdner Bank A.G. - Allianz A.G. Holding

Ranking of Bidders	
Ranking	Name
1	Invesco - Argentaria
2	Banco Bilbao Vizcaya S.A. - Previsión
3	Franklin Templeton - Provida Internacional S.A.

The two selected managers agreed to charge a remarkably low AMMFA (average monthly management fee per account) of $2.37[29]. This is equivalent to about .1% of the average affiliate's salary. The winning bidders chose not to charge a fee for the payment of benefits and the fee for the management of assets was 0.2285% of the portfolio under US$1 billion, 0.014% for the portion of the portfolio between US$1 and US$1.2 billion, 0.0067% for the portion of the portfolio between US$1.2 and US$1.5 billion, and nothing for the rest of the portfolio. The fees are fixed for three years, afterwards they become just a ceiling and can be lowered by the AFP. After the end of the exclusivity period the Superintendency of Pensions can set new maximum fees.

[29] The $2.37 fee is derived from a scenario for assets accumulation and assuming an average salary of $250 for each affiliate on which to collect a 0.5% account management fee.

Assuming that each AFP manages the accounts of 160,000 affiliates during the first year, each can expect income from fees of about US$4.3 million. This income is the result of about US$1.9 million from a fee of 0.2285% on a portfolio of US$800 million from the capitalization program and the accumulation of 10% of the average monthly salary of US$250 of the 160,000 affiliates. The remaining income of US$2.4 million comes from 0.5% of the average salary of its affiliates. Another source of income could come from the affiliation of new members of the pension system.

The two winning bidders have an exclusive concession for the management of the pension system for 5 years. No further AFP licenses will be issued until May 2002 unless the AFPs fail to comply with their contracts. During the exclusivity period the AFPs will also have to comply with service targets. Having only two participants in the market could be considered a threat to competitive behavior. However, the $1.6 billion to be managed for the FCC allowed a competition for the market instead of a competition in the market resulting in competitive fees. Without the substantial initial resources it would have been very difficult to attract interested and reputable bidders. The reputation of the bidders was important because of the approach of initially enforcing regulations through the reputation of the manager instead of a fully developed regulatory authority until regulatory institutions are strong enough. Once the system becomes openly competitive the regulatory institutions should be fully developed.

Once the system becomes fully competitive in five years, some features of the legislation could enhance this competition. The absence of a minimum return guarantee will open a new front for competition that has been absent in pension reforms in other countries. This feature together with a portfolio regulation that gives much more room for the pension manager to set up a portfolio than in other countries will allow the manager to take decisions that reflect more closely its client's needs. This could create market opportunities for more AFPs than could be expected in a market of Bolivia's size.

Custody of Assets

The safety of the capitalization and pension assets will be ensured by entrusting them to a global custodian. This custodian was selected through international competitive bidding and initiated its activities as the trustee of the capitalized assets. The same institution will be the custodian for the first five years of the new pension system. Afterwards the AFPs will be allowed to contract this service from any authorized entity.

The fee of 0.2% of the assets under custody is collected directly by the custodian from the return[30] on the assets and is not paid by the AFPs[31]. It is expected that with the participation of Bolivia's stock exchange the custodian will expand its services from the two AFPs to the rest of the capital market. Trough the custodian, monitoring and registering transactions will be facilitated as well as the supervision of the AFPs by the Superintendency of Pensions.

Transition between Pension Systems

Completely closing the old pension system at the start of the new pension system without a decades long transition is truly remarkable. It not only provides a clean cut with the past but it incorporates all workers, without exceptions for the president, military, police, oil workers, politicians, judiciary etc. It has the benefit of substantially reducing the net present value of the Government liabilities[32], gives a clear signal about the commitment and the permanence of the reform, simplifies the process of reform, supervision and management, reduces the compliance cost for enterprises, and is equitable among all sectors of the working population.

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[30] In case of negative returns the custodian's contract allows him to sell assets to collect its fee.

[31] There are ongoing negotiations about a lower fee for assets that are not traded.

[32] In some scenarios up to a third of the net present value of the liabilities, equivalent to over $1 bn.

The decision to close the old system was also taken because the Government wanted to make clear that the affiliates are the owners of the resources in the system, something that is essentially undefined in a "pay as you go" system. In addition, keeping both systems open either for a long time or permanently has several potential drawbacks: (i) total administrative costs may be higher, (ii) total contribution rates may need to be higher to give both systems a critical mass of funds to manage, (iii) the contribution to the "pay as you go" system continues to be perceived as a tax on labor making more difficult enforcement of payment of all contributions, (iv) the issue of the level playing field between the two systems will continually resurface, and (v) outstanding Government guarantees may be higher.

The only reason to keep both systems in place was to reduce the financing requirements of the transition at the expense of higher public sector liabilities. Closing the old system in Bolivia at the same time that the new system started, although certainly worth doing it, requires a larger financing effort, particularly in the short run. The requirement of having to invest most of the workers contributions of the next few years in treasury bonds to help finance the transition is questionable. This requirement could lower the impact of the pension reform through lower returns on worker's pension accounts[33] and could discourage affiliation.

Financing Requirements of the Pension Reform

Year	1997	1998	1999	2000	2007	2017	2027	2037
% of GDP	2.24	2.72	2.57	2.23	1.33	0.86	0.57	0.18
US$ mn.(1996)	152	192	188	170	134	141	146	72

[33] Efforts are ongoing to develop an efficient market for treasury bonds, so that their return would approach market rates.

Closing the old system also involved critical decisions about the 38 complementary pension funds. Although these funds were nominally private, every time such a fund had a financial crisis, the Government was forced to absorb the payments because these funds had become *de facto* mandatory for the workers in the entities covered by these funds. In addition, there was a large mismatch between the contributions and the promised benefits, both in terms of age requirements and replacement rates, that made it very likely that sooner rather than later almost all these funds would need a Government bail out. The variance in the rules between funds and the limited transferability of rights between them, particularly between the public and private sectors, would have required profound reforms of the complementary funds system. A case by case reform of complementary funds was not politically viable. Under these circumstances there existed a large risk of moral hazard in the management of the complementary funds that promised to substantially increase the liabilities of the Government and to reduce the remaining assets of the funds. Including the complementary funds in the overall reform of the pension system appeared to be the most efficient solution, in spite of a cost in net present value terms of about US$950 million and growth of about 80% in the Government's financing requirements.

E. FUTURE CHALLENGES

The pension reform process is not complete yet. There are complementary and necessary reforms in the capital markets and in the insurance industry that need to be undertaken to put the whole system on good footing. For example, Bolivia doesn't have regulations about what constitutes conflicts of interest in the capital markets. Addressing the insurance sector is an important issue. At the beginning of the new pension system insurance payments will be paid into collective accounts. Once at least 6 insurance companies registered in Bolivia comply with predefined requirements, the AFPs will insure the risks with one of the qualified insurance companies through an open bidding process. To reach this stage as soon as possible, that will most likely result in lower premiums for all workers, the Government needs to pass an improved insurance law, revise the regulations and strengthen the Superintendency of Insurance.

In addition the implementation of the new pension system and closing of the old one are not complete. Many of the initial actions that needed to be taken and where the rules were unclear or absent have left a presence of the Government in the daily management of the system that is still too large. The discussion about alternative uses for the capitalized assets is detrimental for the pension system as a whole, reduces the value of the assets itself, and needs to be brought to closure to secure the reform.

The transition needs to be completed. Among other things, action should cover the following areas:

i. Complete the resolution of outstanding issues with the closed pension institutions.
ii. Gather the information to recognize past contributions and calculate the compensation for each contributor to the old system,.
iii. Fine tune the regulations and their application.
iv. Establish the mechanisms by which the Treasury will transfer the resources to the AFPs or any other private agent for them to pay the pensions of the retirees of the old system.
v. Strengthen the financial sector regulatory institutions, in particular the Superintendency of Pensions and ensure their independence, among other things through adequate working resources.
vi. Develop the statistical information that will allow a better assessment of life expectancy and morbidity, and loss probability so that premiums reflect the real risk situation.
vii. Create a competitive annuities market for the pension system by calling for international bids and furthering the development of the local insurance industry.
viii. Adjust the compensation for past contributions to reflect the actual number of contributions to complementary funds instead of using the number of contributions to FOPEBA and a factor of 0.7; and

ix. Introduce clear rules, well in advance of the end of the exclusivity period in May 2002, about how the opening of the pension market will be accomplished.

The Government should strive to remove at the earliest possible date the probably unnecessary exceptional requirement of investing up to $180 mn. a year in treasury bonds. This minimum investment requirement is not only an implicit tax on the retirement savings of all affiliated workers but it also creates a bad precedent for mandatory uses of the portfolio. If the removal of this requirement is not achievable in the near term because of financial concerns, the Government should make strong efforts to develop an efficient bond market in which it could trade its bonds and document a substantial part of its liabilities. This requirement is a completely different situation of those that existed in other countries where investment ceilings were temporarily removed to reflect the instruments available in the country and the state of development of the regulatory capacity and of local capital markets.

The development of efficient bond and stock markets will require an adequate securities law and regulatory framework. For example the AFPs are facing substantial constraints to trade the capitalized shares they are being paid to manage. Under current rules these shares cannot be readily transformed into a diversified portfolio or considered liquid assets. If the rules of the securities market are not improved in the short term, the pension reform could be undermined.

F. CONCLUDING REMARKS

The Bolivian pension reform represents a bold program that has gone in some respects beyond the Chilean prototype:

- It has involved an immediate closing down of the old PAYGO system and its replacement by a defined contribution system, based on individual capitalization accounts and managed by the private sector.
- The pensions of the old system will be covered by the Bolivian Treasury.
- Workers will receive compensatory pensions for their contributions to the old system. These are calculated on the basis of a simple and, probably, generous formula, that will increase the cost of transition.
- To avoid the very high marketing costs of pension reforms of other Latin American countries, the Bolivian reform has entrusted the management of the system and the individual accounts to 2 groups that have been selected after an international competitive bidding process that has had as its aim to minimize fees.
- Individual accounts have been pre-allocated to these two groups on a regional basis or, for the large cities where both have been authorized to operate, on the basis of the birthday of affiliated workers.
- Competition for individual accounts will be allowed in the year 2000, while the market will be opened to other AFPs in 2002.
- The reform program has also involved the utilization of the proceeds of the "capitalization" program for the payment of a universal annuity to all Bolivians of over 65 years of age.
- The funds of the capitalization program will also be managed by the two selected AFPs, while custodianship has been entrusted to a multinational group offering global custodial services.

- AFP investments are only subject to upper limits, including relatively high limits for foreign assets. However, AFPs are initially compelled to purchase a certain quantity of treasury bonds to help finance the cost of transition.

The major challenges facing the Bolivian reform are:

- To create a competitive market for management of pension fund resources and hence achieve competitive investment returns and higher pensions.
- To eliminate the requirement for a minimum investment in treasury bonds.
- To insulate the new system from future attempts to use the funds of the AFPs and of the capitalization proceeds for public projects.
- One way to achieve this insulation would be to transfer ownership of capitalization proceeds to individual Bolivians.

REFERENCES

Ballivian, Amparo. 1997. *Pension Reform in Bolivia: Fiscal and Social Impacts.* World Bank Draft Discussion Paper, mimeo.

Ewing, Andrew and Susan Goldmark. 1994. *Privatization by Capitalization: The Case of Bolivia--A Popular Participation Recipe for Cash-Starved SOEs.* FPD Note No. 31. Washington, D.C.: The World Bank.

Queisser, Monika. 1997. *Pension Reforms and Private Pension Funds in Peru and Colombia.* Financial Sector Development Department, The World Bank, mimeo.

Vittas, Dimitri. 1997a. *Private Pension Funds in Argentina's New Integrated Pension System.* Financial Sector Development Department, The World Bank, mimeo.

Vittas, Dimitri. 1997b. *The Argentine Pension Reform and its Relevance for Eastern Europe.* Financial Sector Development Department, The World Bank, mimeo.

Vittas, Dimitri. 1997c. *Strengths and Weaknesses of the Chilean Pension Reform.* Financial Sector Development Department, The World Bank, mimeo.

Vittas, Dimitri and Augusto Iglesias. 1992. *The Rationale and Performance of Personal Pension Plans in Chile.* Policy Research Working Paper 867. Washington D.C.: The World Bank.

World Bank. 1995. *Bolivia: Financial Markets and Pension Reform Technical Assistance Project.* Report P6412, November. Washington, D.C.: The World bank.

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